

## DeMaria, Eva

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**From:** LACEY David <LACEY.David@deq.state.or.us>  
**Sent:** Wednesday, November 04, 2015 2:30 PM  
**To:** DeMaria, Eva; MCCLINCY Matt; MANZANO Scott  
**Cc:** Sheldrake, Sean; Michael Allen (allenmc@cdmsmith.com)  
**Subject:** RE: Rhone Poulenc cap containment evaluation modeling

Eva,

Thanks for sending this over. I looked through the presentation and reviewed the objectives and conclusions. The results will be helpful going forward but I am not sure how to use them in directly addressing questions regarding source control at the Rhone-Poulenc site. Based on EPA's previous correspondence and our last meeting it is my understanding that there are two issues that CDM wanted to address with this modeling:

- 1) Is an early source control action needed to address the VOC and herbicide plume or is DEQ's plan to address it in the upland FS reasonable.
- 2) Is the RP DDx plume a recontamination threat to the river.

It would be helpful in tomorrow's meeting if CDM could focus on how the modeling informs these questions. As I noted in my Oct. 20, 2015 email, it looks like CDM may have had a different take away message from our last meeting. I tried to articulate this in my Oct 20, 2015 email and our phone conversations. I would like to start off our meeting on Thursday getting a better understanding of CDM's outstanding concerns regarding groundwater source control for the Rhone-Poulenc site and how the modeling they completed is intended to be used.

The presentation is focused on whether or not a reactive cap is the appropriate remedial action for the VOC and DDx plume's. DEQ does not envision using a reactive cap to manage ground water plumes at the Rhone-Poulenc Site for the following reasons:

- In regards to VOCs, DEQ has determined that there is a complete pathway to the river and that the groundwater pathway needs to be addressed in the FS. DEQ determined the following COCs exceed SLVs/PRGs at the riverbank: VOCs (1,2-DCB, 1,3-DCB, 1,4-DCB, chlorobenzene, benzene, trichloroethene, vinyl chloride) and herbicides (silvex, and dichlorprop). However as presented in our RI/SCE Addendum for the Site we determined that "While documented impacts to Willamette riverbed sediments in the area of the Outfall 22B have resulted from the groundwater pathway, there is only one detection of chlorobenzene and one detection of 1,4-dichlorobenzene in river sediment above SLVs in the Outfall 22B area. Based on the lack of current significant sediment SLV exceedances in sediment and the low soil organic carbon partition coefficient of the VOCs and herbicides, it does not appear that the contaminated groundwater plume poses a significant sediment recontamination risk. As such, sediment recontamination via groundwater does not need to be addressed at this time in a separate Source Control Alternatives Evaluation but the groundwater to surface water pathway will need to be carried forward as a remedial action objective in the Rhone-Poulenc feasibility study." DEQ is requiring Rhone-Poulenc to address the groundwater pathway in the site-wide FS and implement a remedy as part for the ROD. An RAO in the FS will specifically address the groundwater pathway to the river and protection of ecological and human health in the pore-water affected by groundwater discharge. So, the issue here is really a matter of timing. Is a DEQ directed groundwater remedy implemented as part of the upland ROD soon enough or does a groundwater remedy need to be implemented sooner?
- In regards to DDx DEQ determined that no action is needed by Rhone-Poulenc. DDx does not appear to be migrating through the deep groundwater pathway. DDx emanating from the former Doane Lake sediments are masked by the Arkema sources between the former Doane Lake sediments and the riverbank, and finally the DDx plume on the Siltronic property along the Rhone-Poulenc flow path is of very low concentrations and sporadic. CDM was concerned that Rhone-Poulenc had not demonstrated that the low level DDx plume did not pose a risk to the river sediment. CDM proposed that the effects of the plume be modeled to evaluate how it

would impact river sediments. So, the issue is does the Rhone-Poulenc DDx plume pose a risk to river sediment. To address I don't think using the maximum concentration observed on the Arkema riverbank is useful. Concentrations along the Siltronic riverbank and directly downgradient of Northwest Front Ave. would be more useful in determining the threat posed from Rhone-Poulenc related DDx. Concentrations in these areas are generally two to three orders of magnitude lower than the value used in the modeling. The value used in the model of 13.1 ppb is a very isolated result and not consistent with the upgradient data. It may be helpful to have CDM look at a range of DDx concentrations to inform this decision.

The modeling will be useful in developing the FS and I think we should pass it along to RP as soon possible so it can be incorporated into their work. After our meeting we should decide how best to finalize the assessment and package it up for RP.

Thanks,  
Dave

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**From:** DeMaria, Eva [mailto:DeMaria.Eva@epa.gov]  
**Sent:** Monday, November 02, 2015 1:31 PM  
**To:** MCCLINCY Matt; MANZANO Scott; LACEY David  
**Cc:** Sheldrake, Sean; Michael Allen (allenmc@cdmsmith.com)  
**Subject:** Rhone Poulenc cap containment evaluation modeling

Hi all-

Please find attached the presentation we'll be using for the Rhone Poulenc modeling discussion we're having this Thursday, 1:30-3 pm. Call or email if you have questions beforehand. Thanks!

Eva